

**FINANCING STRATEGY FOR FSRU BELAWAN PROJECT:
A RECOMMENDATION ON FINANCING STRATEGY FOR THE FSRU
BELAWAN PROJECT**

Erik Sentosa and Sudarso Kaderi Wiryono
School of Business and Management
Institut Teknologi Bandung, Indonesia
Erik.sentosa@sbm-itb.ac.id

Abstract--Related to PGN's plan to invest in Floating Storage and Regasification Unit (FSRU) in Belawan, Medan, Budget Division of PGN needs an efficient financing strategy. Based on PGN's financial condition in 2010, four scenario of financing strategy were analyzed. The four financing strategy are carried out by issuing right, issuing corporate bond, combination of issuing right and utilizing company's liquid assets, and combination between issuing corporate bond and utilizing company's liquid asset. Each scenario is analyzed by computing its WACC and assessing NPV, IRR and payback period based on the calculated WACC. Along with that, the opportunity costs, securities issuance costs, and its effect to company's liquidity are also assessed. The recommended solution is to issue corporate bond and utilizing excess liquidity, since this strategy has the highest NPV, no opportunity cost in issuing undervalued stock, short period of debt repayment, and relatively acceptable effect on company liquidity. Another part of the report is the risk management strategy for the project. The risk management is mainly mitigating the funding liquidity risk, and the market risk of interest rate, foreign currency and natural gas price. The implementation plan will discuss about the project management in corporate bond issuance and liquidity allocation for project financing and risk management.

Keywords: Financing strategy, FSRU, Right issue, Corporate bond issue, WACC.

I. INTRODUCTION

The topic of this paper is obtained due an assignment at Perusahaan Gas Negara. Even though the assignment is not related to the discussion on this paper, it gives me the bird view on how PGN carries out its business as usual.

PT Perusahaan Gas Negara (Persero), Tbk, better known by the abbreviations PGN or PGAS as naming for the stock, is a state-owned enterprise that was established to distribute gas from oil and gas exploitation areas to users in industrial zones, and even to residential areas.

Due to the increasing competition nature in Indonesia's gas industry, PGN has decided to expand its business to both upstream and downstream of its business value chain. In order to manage this issue, the directors of PGN have decided to accelerate the research and technology development in PGN. These research and development activities are expected to be the start-ups for PGN business expansions.

When PGN was founded, its core business was the distribution of gas to residential areas. In line with the times, gas distribution and gas transportation now form the core of PGN's business. The Company's operational area currently covers almost all of western and eastern of Java and northern of Sumatera and will soon extend throughout the entire territory of Indonesia.

As the competition developed, PGN has to diversify its business. One of the diversification initiative is to procure Floating Storage and Regasification Unit (FSRU) in Jakarta Bay and Belawan, Medan. As FSRU in Jakarta Bay is a joint operation with PLN, FSRU Belawan is going to be PGN's investment.

The Budget Division of PGN is responsible for managing the financing process of FSRU Belawan project. This paper is a

recommendation made for Budget Division of PGN on how this project should be financed.

The investment of FSRU in Belawan will make a change in PGN's financing strategy since it takes large portion of PGN's capital and will gain profits, and what are the right initiatives that have be done in order to add the value of the company regardless of the capital intensive and risky project it is carrying out.

Due the nature of this project, which is capital intensive, it is necessary to have the right financing strategy and risk management strategy according to PGN's current and projected financial condition related to this investment. Mismanagement on financing strategy and risk mitigation could lead PGN to financial distress and project failures.

II. BUSINESS ISSUE EXPLORATION

A. Conceptual Framework

PGN needed a financing strategy for the FSRU Belawan project that affects in minimum extend to its corporate finance. PGN needed the project to finance itself from its cash inflow. However, PGN is still capable to absorb some impacts from this investment, as far as it does not cause financial distress to PGN's corporate finance.

As stated by accounting basic principle that assets come from company equity and liability, corporate unutilized asset is also a source of financing. This study carries out which combination of financing sources will affects minimally to PGN's corporate finance, with capability to bringing high profitability from FSRU Belawan operation.

B. Method of Data Collection and Analysis

The data mostly are obtained from reference studies conducted through electronic and literature researches. Basic financial concepts such as hurdle rate calculation, feasibility study and stock valuation are studied through literature research, whereas there were some concepts that are modified from basic financial concepts, such as cashflow matching strategy.

C. Analysis of Business Situation

The business issue exploration is begun with identifying financing sources for PGN. There are internal and external financing available for PGN, each of financing alternative has its pros and cons.

C.I. Internal Financing

One of funding alternatives is internal financing. Internal financing is obtained from company's asset. Liquid asset and cash are the main internal financing sources. Liquidity ratios such as current ratio and quick ratio can be analysis tools whether the company is capable to make the purchase from its liquid asset. By benchmarking the liquidity ratios with other companies in the same industry and market that has been succeeded, a company can follow their financial initiatives through success.

Selling corporate asset can be a source of internal financing as well. Factoring service is also available as a short-term financing resource. Factoring is a practice of obtaining liquidity by selling firm's receivables at discount. This strategy could provide liquidity for the company as a tradeoff for future cashflow. Therefore, it is important to assure that the absence of this future cashflow will not lead the company into financial distress.

Funding from asset is considerably the less costly since there is no fee that needs to be paid to the third party. It can be costly if it includes the process of selling existing asset at discount, and use the cash resulted from the sales.

In the case of PGN, the available funding from liquid asset is calculated by benchmarking its current ratio to the average value of natural gas utility companies current ratios.

The formula of current ratio is:

$$\text{Current ratio} = \frac{\text{Total asset}}{\text{Total liability}}$$

If then PGN has excess liquidity compared to other companies in the same industry, this liquid asset then will be utilized as financing source from asset.

C.II. External Financing

There are projects that are so capital intensive for the company, that requires external funding. In this case the external funding will affect company's liability and equity portion. From equity side, funding can be obtained by issuing new stocks to investors. Whereas from liability side, funding can be obtained by borrowing from bank or non-bank sources. For small and medium company, borrowing from bank is an attractive alternative to finance the funding needs. For large companies with high credit

rating, external funding can be obtained with lower cost of borrowing by issuing debt securities. However, there are other costs that need to be put into consideration as a trade off the cheap cost of borrowing.

The right financing alternative also depends of the condition of corporate finance. There are factors to be considered, such as whether issuing new stocks is a good strategy at the time. For financing from debt, whether the company projected cashflow is capable to handle the interest rate and principal of the loan.

As capital structure contains of debt and equity, the key of the right capital structure is to borrow money large enough to give significant tax benefit, but not excessive that could lead the company to financial distress or credit rating and reputation downgrades.

Larger portion of debt will increase the default risk of the company. As the risk in the company increases, company credit rating will be downgraded, the cost of debt will increase. It also will affect the beta of the company. Since larger portion of debt causes investing in company's equity become more risky, the value of the beta will increase. As the value of beta increases, the cost of equity increases as well. In a safe amount, larger portion of debt will give tax benefits to the company. However, it is also contributes in charging the company bankruptcy cost. Bankruptcy costs include the costs of going bankrupt (which are legal cost and reputational cost) and the probability of bankruptcy (which is future cash flow uncertainty).

The fact that as corporate tax is large, the portion of larger debt will decrease the cost of capital is aligned with Modigliani and Miller's formulation (1958) that states with a well-formulated set of assumptions, the WACC is constant, which means the optimal capital structure does not exist. The well-formulated set of assumptions include: markets are perfect, transaction costs are negligible, market behavior is rational, and taxes are zero.

The bond and stock issuance usually involves underwriter firm. Underwriter firm generally provide advices on corporate finance and funding strategy, arrange the registration and marketing process, and underwrite the issue. There are two types of underwriting: firm and best efforts. In a firm underwriting, underwriter purchase the securities at a specific price and

resell it at marked-up price. The marked-up price is agreed by emitter firm. In best efforts underwriting, the underwriter firm make the best efforts in marketing the securities to the potential investors. However, the underwriter is not committed to make the purchase on the securities.

Before conducting the feasibility study, it is necessary to calculate the discount factor by calculating the Weighted Average Cost of Capital (WACC).

Cost of equity (K_e) is the return of investment that investors expect from investing in a company. In this case, we measure the return of investment that expected from investors to invest in an FSRU. However, the investors biased by the reputation of PGN, so it is fair if we calculate the number of K_e equals to K_e of PGN's stock.

CAPM Formula is used to calculate cost of equity which is:

$$K_e = R_f + \beta(R_m - R_f)$$

The risk-free rate is a return of investment of a default-free security. The project is estimated taking time for 20 to 30 years. Therefore, we use 20-year and 30-year Indonesian government zero coupon bond as a risk-free investment instrument. The yield for this are 7.45% and 7.24%. Taking the middle value, we get 7.35%.

Beta calculation is carried out by performing linear to stock returns against market returns. The slope of the regression corresponds to the beta of the stocks, and measures the riskiness of the stock.

According to Moody's, in January 2012 Indonesia's rating is Ba1. Developed countries' market risk premium is at 6%, whilst according to Damodaran (2012), Indonesia's country risk premium is 3.60%. Therefore, the market risk premium is $6.00\% + 3.60\% = 9.60\%$.

The calculation of cost of debt (K_d) is begun with computing interest coverage ratio. The formula for interest coverage ratio:

$$\text{Interest coverage ratio} = \frac{EBIT}{\text{Interest expense}}$$

The interest coverage ratio will determine the company rating. The company rating then will determine the company spread for the pre-tax cost of debt calculation.

The Pre-tax cost of debt is:

$$\text{Pre-tax } K_d = R_f + \text{company spread} + \text{country spread}$$

Since debt is tax deductible, so the after tax cost of debt is:

$$\text{After-tax } K_d = \text{pre-tax } K_d \times (1 - t)$$

The cost of capital is obtained using this formula:

$$WACC = K_e \times \frac{E}{(E + D)} + K_d (\text{after tax}) \times \frac{D}{(E + D)}$$

Before knowing how the project would be financed, the feasibility study on this project is carried out with current WACC. The feasibility study consists of computation of net present value (NPV), internal rate of return (IRR) and payback period (PBP).

The first analysis computation is NPV. The formula of NPV is:

$$NPV = \sum_{t=0}^N \frac{R_t}{(1 + i)^t}$$

With t is the time of cashflow, i is the discount rate, and R_t is the net cashflow at time t .

The second analysis computation is IRR. The computation of IRR is carried out by finding on what discount rate the NPV is equal zero.

The third analysis computation is PBP. The formula of PBP is:

$$PBP = \frac{C_{total}}{R_t}$$

With C_{total} is total cost of project, R_t is annual cash inflow. The calculation requires the number of PBP when $C_{total} = R_t$.

In addition to the feasibility study, additional cost from each scenario is also calculated. The amount of additional costs are calculated by the formula:

$$\text{Additional cost} = \text{Opportunity cost} + \text{Securities issuance cost}$$

The less additional cost applied means the better solution for the company. However it means a good solution only if the feasibility study come up with good results as well.

III. BUSINESS SOLUTION

A. Alternative of Business Solution

The proposed alternatives were (1) financing from equity, (2) financing from debt, (3) financing from the combination of asset and equity, and (4) financing from the combination of asset and debt.

The volume of the stocks issued in Scenario 1 and corporate bonds issued in Scenario 2 are equivalent to the amount of the financing needed for the project. The amount of the stocks issued in Scenario 3 and corporate bonds issued in Scenario 4 are equivalent to the amount of the financing needed for the project, after financed by PGN available liquid assets from its excess liquidity.

B. Analysis of Business Solution

Based on PGN's 2010 annual report, PGN's current ratio is 3.43, whilst average current ratio of companies in the same industry is 2.7. The initial constraint to utilize PGN liquid asset is not to go lower than 2.7. Therefore, the available liquid asset by utilizing is Rp. 2,946,117,332,411.

Table 1. Available funding from liquid asset

	Current Ratio:	Liquid asset:
2010's current ratio:	3.43	Rp.13,842,715,685,163
Target current ratio:	2.7	Rp. 10,896,598,352,752
Available current asset from excess liquidity:		Rp. 2,946,117,332,411

To understand which scenario is the most economically reasonable for PGN, there are four factors to examine in each scenario. They are (1) WACC and corporate capital structure after the change of amount on debt and equity due to project financing needs, (2) the affect of liquidity and its effect to PGN's liquidity ratios, (3) Issuance cost on issuing certain volume of securities instruments (stocks or bonds), (4) Cashflow sufficiency in repaying corporate debt while carrying out the FSRU Belawan project, and (5) Opportunity cost for issuing undervalued stocks.

The capital infusion from equity or debt affects PGN's capital structure. Funding addition from equity side increases the value of optimum point at capital structure and the WACC, whereas funding addition from debt side decreases the optimum point in the capital structure and the WACC. Table 1 shows the results on the optimum point at the capital structure and the WACC shifts..

Table 2. Optimum Capital Structure and WACC for each scenario

	Scenar io 1 (E)	Scenar io 2 (D)	Scenar io 3 (A+E)	Scenar io 4 (A+D)
Optimu m	13.89 %	12.83 %	13.45 %	13.32 %
WACC	14.00 %	13.28 %	13.59 %	13.46 %

Excess liquid asset is allocated for Scenario 2, 3 and 4. Scenario 1 does not requires utilization from liquid asset since all the financing will be satisfied by issuing right. In Scenario 2 the financing is will be satisfied by issuing corporate bond, However, the liquidity is still needed for the first three year since the operation is not established to repay the annual interest rate. In Scenario 3 and 4, PGN's excess liquidity is fully-utilized, the rest of financing need is then satisfied by issuing rights and corporate bonds.

Table 3. Liquidity changes due to excess liquidity utilization

	Scenar io 1 (E)	Scenar io 2 (D)	Scenar io 3 (A+E)	Scenar io 4 (A+D)
Curre nt ratio range	3.24 to 3.38	2.51 to 2.65	2.51 to 2.65	2.51 to 2.65

According to Thompson Finance (2009), the issuance costs for stocks is higher than bonds. With this reference the issuance cost on each scenario is calculated. The results are presented by Table 4.

Table 4. Securities instruments issuance costs

	Scenari o 1 (E)	Scenar io 2 (D)	Scenar io 3 (A+E)	Scenar io 4 (A+D)
Issuan ce costs	163.63 Bn.	28.02B n.	32.10B n.	2.31Bn .

The calculation on opportunity cost from issuing undervalued stocks discovered that Scenario 1 resulted opportunity cost of Rp. 1,885,450,637,000, whereas Scenario 3 resulted opportunity cost of Rp. 610,001,653,759.

The calculation on cashflow sufficiency is carried out only for scenarios that issuing corporate bond as financing source, which is Scenario 2 and 4. In these scenarios, the cash used for principal and interest rate repayment is allocated from operation income of the project. The results in order to assure that there is no cashflow prolem during the operation, a 13-year repayment period is required for PGN to repay its debt in Scenario 2 and a 3-year repayment period is required in Scenario 4.

Based on the new WACC and each corrected cashflows, the results on feasibility study are shown by table 5.

Table 5. NPV, IRR and PBP with the new WACC

Scena rio	Ana lysis	Scen ario 1 (E)	Scen ario 2 (D)	Scen ario 3 (A+ E)	Scen ario 4 (A+ D)
Optim istic	NP V	4,507 Bn.	4,982 Bn.	4,767 Bn.	5,479 Bn.
	IRR	35.91 %	32.84 %	35.91 %	34.01 %
	PBP	6 year	7 year	6 year	6 year
Most- likely	NP V	2,942 Bn.	3,299 Bn.	3,140 Bn.	3,849 Bn.
	IRR	30.40 %	26.99 %	30.40 %	28.81 %
	PBP	7 year	7 year	7 year	7 year

Pessimistic	NPV	658Bn.	851Bn.	766Bn.	1,478Bn.
	IRR	21.25%	17.24%	21.25%	20.12%
	PBP	10 year	10 year	10 year	9 year

Beside the NPV, IRR and PBP based on operation costs and income from operations, there are opportunity costs that occur from issuing undervalued stocks, and interest rate to repay from issuing corporate bond.

Table 6. Additional cost for each financing scenario

	Scenario 1 (E)	Scenario 2 (D)	Scenario 3 (A+E)	Scenario 4 (A+D)
Issuance cost	163.63 Bn.	28.02 Bn.	32.10 Bn.	2.31Bn.
Opportunity cost from issuing undervalued stocks	1,885.45Bn.	0	610.00 Bn.	0
PV of interest rate	0	2,670.10 Bn.	0	227.66 Bn.
Total costs	2,049.08 Bn	2,698.11 Bn.	642.10 Bn.	229.96 Bn.

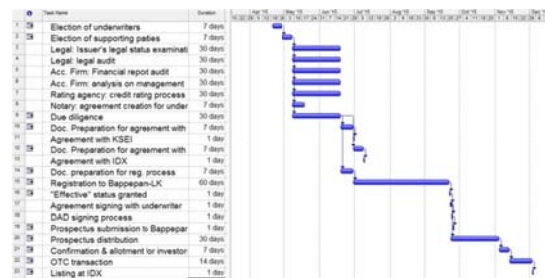
Based from the analysis above, the decision for FSRU Belawan Project financing was to carry out Scenario 4, which is utilizing PGN's excess liquidity. The rest of financing needs is then satisfied by issuing corporate bond. This decision is chosen since this scenario provides highest NPV, shortest PBP, and low WACC.

IV. CONCLUSION AND IMPLEMENTATION PLAN

Scenario 4 is a scenario that includes corporate bond issuance. Since the bond issuance will be carried out in 2015, and the process of issuing bond may take up to three months, the timeline of these initiatives has to be accurate to avoid timing mismanagement.

As shown by table 7, the bond issuance process requires 9 to 10 months of process before the bond is listed.

Table 7. Timeline for corporate bond issuance process



The related parties of the corporate bond issuance process are: Bappeppam-LK, Indonesia Stock Exchange (IDX), PT. Kliring Penjaminan Efek Indonesia (KPEI), Kustodian Sentral Efek Indonesia (KSEI), potential investors, underwriter, and supporting parties such as accountant firm, notary, legal consultant and rating agency to carry out the corporate bond issuance process.

The pre-registration phase is the phase when the issuer appoints the notary, credit rating agency, accounting firm and legal consultant to prepare the administrative requirements for the company to start the registration process. The notary prepares the deed of acknowledgement of debt creation, which will be signed by the underwriter in the registration process. Rating agency produces the bond's credit rating based on the conditions of the corporate finance. Accounting firm provides audit report on the company based on the audit and analysis on the management. Legal consultant provides legal opinion based on legal audit. Each process is done within one month, these processes are estimated to be carried out from 8th of May 2015 to 18th of June 2015.

The registration phase is the phase when the required documents are submitted to SRO of Indonesia's capital market. The issuer submits registration documents to Bappeppam-LK and waited for 45 working days for the registration process. The registration process is estimated to be take place from 30th of June 2015 to 22th of September 2015. Along with these documents, there are agreement documents that need to be written in relation with service utilization of IDX and PT. KSEI in bond sales and transaction.

Right after the "effective" status is granted by Bappeppam-LK, the offering phase is begun. The

“effective” status is estimated to be granted on 22nd of September 2015. The offering phase is the phase where the bond issuer carries out its attempts in offering the bond to the market. The process consists of agreement establishment with the underwriter, prospectus distribution to the potential investors and Bappepam-LK, confirmation and allotment to the primary market, bond sales, and listing in the exchange. All the processes in the offering phase is estimated to take place from 22nd of September 2015 to 3rd of December 2015.

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